

AFANAS'YEV, A.P.; ANUCHIN, V.G.; VINOGRADOV, K.V.; GARANINA, M.M.;
GILEROVICH, M.M.; DUBROVSKIY, Ye.P.; YEVSTIGNEYEV, A.A.; IOKEVIN,
M.R.; KALMYKOV, P.M.; KRENGEL', I.TS.; LOSEV, I.G.; MAYEVSKIY,
F.M.; MAZEL', S.I.; MIZHERITSKIY, G.S.; NOVIKOV, M.I.; NAZAR'YEV,
O.V.; PCHELKINA, I.A.; RAZUMOV, V.S.; ROZENBLYUM, I.M.; SEROV, B.P.;
SKRYPNIK, T.I.; SAL'VIN, Ye.S.; SMOTRINA, V.F.; TELEPNEVA, N.S.;
FIL'CHAKOV, N.I.; KHRAMUNOVA, Ye.L.; UNDREVICH, G.S.; UR'T'YEV, P.P.;
SHILOV, A.A.; SHYKOV, A.P.; KIRILLOV, L.M., red.; MARKOCH, M.G.,
tekhn.red.

[Regulations on the construction of municipal telephone network lines]
Pravila po stroitel'stvu lineirnykh sooruzhenii gorodskikh telefonnykh
setei. 2.izd. Moskva, Sviaz'izdat, 1962. 511 p. (MIRA 15:5)

1. Russia (1923- U.S.S.R.) Ministerstvo svyazi. Glavnoye upravleniye
kapital'nogo stroitel'stva.
(Telephone lines)

YEVSTIGNEYEV, A.S.; POPOV, A.N.

Evaporation from a water surface overgrown with vegetation. Meteor. i
gidrol. no.4:32-34 Ap '57. (MLRA 10:5)
(Evaporation)

YEVSTIGNEYEV, G., podpolkovnik

"Your son has been admitted to the party." Av. i kosm. 47 no.2:15-
17 F '65. (MIRA 18:4)

EVSTIGNEEV, G. P. and S. SHEVELEVA.

Mashinizatsiia ucheta; uchebnoe posobie. Moskva, Gosfinizdat, 1948.
247 p. illus.

(Mechanization of the accounting system.)

DLC: HF5679.E85

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953

YEVSTIGNEYEV, O P

Organizatsiya mekhanizirovannogo ucheta. Organization of mechanized calculation,
by G. P. Yevstigneyev (1) B. M. Drozdov. Moskva, Gosfinizdat, 1949.
335 p. Illus., Diagr., Tables.

■ 283213.

Manual covering the course of mechanical calculation for studies of economics in higher
educational institutions.

YEVSTIGNEYEV, G.P.

YEVDOKIMOV, I.S.; YEVSTIGNEYEV, G.P.; KRIUSHIN, V.N.; DROZDOV, B.M., redaktor;
TRESVIATSKIY, H.H., retsenzent; SOKOLOVA, T.F., tekhnicheskij redaktor;

[Calculating machines] Schetno-tsifrovye mashiny; uchebnoe posobie
dlya tekhnikumov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'
noi i sudostroitel'noi lit-ry, 1953. 326 p. (MIRA 9:1)
(Calculating machines)

YEVDOKIMOV, Ivan Semenovich, YEVSIGNEYEV, German Pavlovich, KRYUSHIN,
V.E.

[Calculating machines] Schetnye mashiny. Izd. 2. 2., perer. i
dopol. Moskva, Gos. nauch.-tekhn. izd-vo mashinostroitel'noi
lit-ry, 1955. p. 387. (MIRA 11:10)
(Calculating machines)

YEVSTIGNEV, GERMAN P

RYAZANKIN, Vladimir Nikolayevich; YEVSTIGNEV, German Pavlovich;
TRESBYATSKIY, Nikolay Nikolayevich [deceased]; DOBROGURSKIY,
S.O., professor, doktor tekhnicheskikh nauk, redaktor; DOSTUPOV,
B.G., kandidat tekhnicheskikh nauk, retsenzent; DOBROSMYSLOV, V.I.
inzhener, retsenzent; POLYAKOV, G.F., redaktor izdatel'stva;
SOKOLOVA, T.F., tekhnicheskiiy redaktor

[Calculating machines] Vychislitel'nye mashiny. Pod red. S.O.
Dobrogurskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, Pt. 1. [Calculating machines with keys] Vychislitel'nye
klavishnye mashiny. 1957. 251 p. (MLRA 10:5)
(Calculating machines)

YEVSTIGNEYEV, German Pavlovich, dotsent; ISAKOV, Vasil'y Ivanovich, dotsent;
KONDRAT'YEVA, A., red.; TELEGINA, T., tekhn.red.

[Organization of machine accounting] Organizatsiia mekhaniziro-
vannogo ucheta. Izd.3., perer. 1 dop. Moskva, Gosfinizdat, 1958.
462 p. (MIRA 12:1)

(Machine accounting)

22(1)

SOV/3-59-4-6/42

AUTHOR: Yevstigneyev, G.P., Candidate of Economic Sciences, Docent

TITLE: To Establish a Vuz - a Mechanized Accounting Plant

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 4, pp 22-24 (USSR)

ABSTRACT: Lately, the Moscow Economic - Statistical Institute conducts its work in close cooperation with the plants of the Moskovskiy gorodskoy sovnarkhoz (Moscow Municipal Sovnarkhoz), thereby improving the training of specialists in the mechanization of recording and calculating work. In the 1957/58 school year, students spent 1,500 working days at the 4 plants - "Kalibr", "Krasnyy Proletariy", imeni M.I. Kalinin and the Presnenskiy mashinostroitel'nyy zavod ("Presnenskiy" Machine Building Plant) - carrying out graduation tasks or participating in the realization of projects. Over 150 students studied initial documentation at 53 plants; in the course of 2 months, 160 students participated in compiling the RSFSR balance of national economy at the Statisticheskoye upravleniye (Statistical Administration), staying there for more than 1,400 working days. The work of instructors of the

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Chair "Computing Machines and Their Exploitation" deserves mentioning: In 1957 and 1958 the Chair developed and brought into use a relay attachment to the sorting machine S45-6 designed to control logically incompatible indications contained in replies to questions of the census sheet. This device effectively helps to withdraw perforated cards containing contradictory data transferred from census sheets. For the processing of the All-Union census data, 120 machines with relay attachments were manufactured and installed in 57 mechanical computer stations of the republic and oblast' statistical administrations, and in the Tsentral'naya mashinoschetnaya stantsiya (Central Mechanical Computer Station) of the All-Union census. The economical effect of applying the attachment will amount to 8 million rubles according to the calculations of the Otdel mekhanizatsii Upravleniya po provedeniyu Vsesoyuznoy perepisi naseleniya TsSU SSSR (Department for Mechanizing the Administration of the All-Union Census TsSU USSR). The students' work in designing and applying new engineering methods deserves special attention. In the summer of 1958, 62 students participated

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in making logical schemes for an electronic machine used for processing statistics. This year, the electronic ciphering machine will be assembled, and in 1960 a program for the processing of material will be composed. The author explains how the problem of finding work for the students was solved by sending all 4th course students to the Central Mechanical Computer Station, where the students have good possibilities for scientific work. However, it complicates the proper arrangement of training. This could probably be overcome if large non-state-financed mechanical computer plants were united with vuzes thereby establishing a plant-vuz. Their training and production schedule will change from time to time in accordance with requirements in specialists for one or the other branch. Since the Central Mechanical Computer Station will finish processing the basic indices of the All-Union census by the end of the year, the author suggests that the station be reorganized into a mechanical computer plant and a plant-vuz established.

ASSOCIATION: Moskovskiy ekonomiko-statisticheskii institut (Moscow Economic-Card 3/3 Statistical Institute).

INVESTIGATIVE, G.

Important potential for reducing administrative personnel.
Vop. ekon. no.2:143-150 F '60. (MIRA 13:1)
(Machine accounting)

YEVDOKIMOV, Ivan Semenovich; YEVSTIGNEYEV, German Pavlovich;
KRIUSHIN, Vasilii Nikolayevich; CHERNOVA, Z.I., tekhn. red.;
UVAROVA, A.F., tekhn. red.

[Digital computers] TSifrovye vychislitel'nye mashiny. Izd.3.,
perer. i dop. Moskva, Mashgiz, 1961. 456 p. (MIRA 15:2)
(Electronic calculating machines)
(Electronic digital computers)
(Punched card systems)

YEVSTIGNEYEV, G.P.; USKOV, N.F.; SERGEYEV, V.M., red.

[Calculating machines and their operation] Schetnye ma-
shiny i ikh ekspluatatsiia. Moskva, Vysshiaia shkola,
1964. 422 p. (MIRA 17:10)

YEVSTIGNEYEV, I.A., inzh. (Leningrad)

Aeration in sewage purification basins before the discharge of
water into reservoirs. Vod. i san. tekhn. no.1:15-17 Ja '66.
(MIRA 19:1)

YEVSTIGNEYEV, K. N.

AID P - 490

Subject : USSR/Mining

Card 1/1 Pub. 78 - 4/27

Authors : Yevstigneyev, K., Matyushin, R. and Salov, V.

Title : Well drilling with forced water flushing

Periodical : Neft. Khoz., v. 32, #6, 17-22, Ju 1954

Abstract : Improvements for reduction of the cost of drilling in various oil fields of the Tuymazaburneft' trust are described. The improvements are related mainly to adoption of modern technological processes and modification of outdated technical standards and regulations. Water flushing in drilling is widely used instead of the drilling fluids with mud in order to increase the speed and to reduce the required power for pumping. The hydraulic resistance of water is about 30% less than that of drilling mud fluids and the power for water pumps is about half as large as that for the drilling fluids. Comparative drilling operation data are presented in two tables.

Institution : None

Submitted : No date

YEVSTIGNEYEV, K. N.

AID P - 3050

Subject : USSR/Mining

Card 1/1 Pub. 78 - 4/20

Authors : Yevstigneyev, K. N., Bobko, I. D. and Chepurnoy, S. I.

Title : Experience in drilling wells by turbo-drills in
Tuymazy

Periodical : Neft. khoz., v. 33, no. 8, 19-24, Ag 1955

Abstract : Report on the results of using electric turbo-drills
for heavy formations. Data are shown in tabular
form.

Institution : None

Submitted : No date

ARKHANGEL'SKIY, N.K.; YEVSTIGNEYEV, K.N.

Experimental industrial drilling using an electric drill with drill
column. Neft. khot. 35 no.8:13-19 Ag '57. (MIRA 10:11)
(Oil well drilling)

ARKHANGEL'SKIY, Nikolay Konstantinovich; YEVSTIGNEYEV, Konstantin
Nikitovich; TOMASHPOL'SKIY, Leonid Markovich; SEROVA, Ye.I.,
vzdukhchiy rad.; POLOSINA, A.S., tekhn.red.

[Techniques and economics of electric drilling] Tekhnika i
ekonomika elektrobureniia. Moskva, Gos.nauchno-tekhn.izd-vo
neft. i gorno-toplivnoi lit-ry, 1959. 120 p. (MIRA 12:11)
(Oil well drilling--Equipment and supplies)

YEVSTIGNEYEV, L.F., inzh.

Automatic unloading of hydraulic pumps and limiting of idle
operations. Prom.energ. 17 no.10:9-11 0 '62. (MIRA 1:9)
(Pumping machinery) (Automatic control)

YEVSTIGNEYEV, L.F., inzh.

Improvement of some types of high-frequency systems. From.
energ. 18 no.4:10-11 Ap '63. (MIRA 16:4)
(Automatic control)

YEVSTIGNEYEV, M.I., kandidat tekhnicheskikh nauk.

Basic parameters of generating racks used for cutting circle-arc
spur gear teeth. Trudy MAI no.70:5-19 '56. (MLRA 9:12)
(Gear-cutting machines)

BELIKOV, Vasilii Nikolayevich; NIKITIN, Aleksandr Nikitich; SIVKOV, V.I.,
inzh., retsenzent; YEVSTICHAYEV, M.I., dotsent, retsenzent;
GRIGORASH, K.I., red.; ROZHIN, V.P., tekhn.red.

[Assembly of airplane engines; a manual] Sborka aviatsionnykh dviga-
telei; uchebnoe posobie. Moskva, Gos.izd-vo obr.promyshl., 1959.
119 p. (MIRA 13:3)

(Airplanes--Engines)

SULIMA, A.M.; YEVSTIGNEYEV, M.I.; TRUSOV, V.M.

The VIU-1 MAI-VIAM high-power high-power high-frequency unit used
for endurance and vibration tests of parts and units of jet engines
and aircraft materials. Nauch. dokl. vys. shkoly; mash. i prib.
no.2:110-119 '59. (MIRA 12:12)

(Testing machines)

(Airplanes--Turbojet engines--Testing)

25967

S/535/60/000/129/005/006
E193/580

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also 2206, 2808

AUTHORS: Sulima, A.M., Yevstigneyev, M.I., Zhukov, S.L.,
Candidates of Technical Sciences, Shadskiy, I.A. and
Zhukov, N.D., Engineers

TITLE: Investigation of endurance of titanium-base and other
heat-resistant alloys tested on the BNY-1 MAI-BNAM
(VIU-1 MAI-VIAM) machine under high frequency loads

PERIODICAL: Moscow. Aviatsionnyy institut. Trudy, No.129, 1960.
Issledovaniye fizikomekhanicheskikh i ekspluatatsionnykh
svoystv detaley posle obrabotki, pp. 92-111

TEXT: The object of the investigation described in the
present paper was to determine the endurance limit of a titanium
alloy BT3-1 (VT3-1) and two nickel-base alloys of the 3N617 (EI617)
and ЖС6К (ZhS6K) type, and to study the effect of the frequency
of alternating loads on this property. The main shortcoming of
the conventional fatigue testing methods is that the test conditions
bear little relation to the conditions obtaining in service; in
addition, they are time-consuming, 4-5 months of continuous work
being required to construct on fatigue curve. It was for these
reasons that a high frequency testing machine (VIU-1 MAI-VIAM) was
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used in the present investigation. The machine (whose detailed description is given) is of the resonance type and was designed for single-plane bending fatigue tests which can be carried out under the conditions of both imposed and resonance vibrations. The vibrations, generated by a powerful electromagnetic system consisting of an amplifier and a transformer, are transmitted to the test piece through a heavy beam, capable of producing alternating loads which are sufficiently high to break standard test pieces or even actual components, such as turbine blades. The auxiliary equipment consists of a microscope used for setting the test piece and for measuring the vibration amplitude which at high temperatures is measured with the aid of a cathetometer, and an electrical resistance furnace for high temperature work. Before testing, the test pieces were heat treated according to schedules given in Table 2. The tests were carried out on cylindrical test pieces of the cantilever type. The gauge length l of the test pieces varied depending on the load frequency and test temperature, and was calculated from the formula

$$l = \sqrt{\frac{(1.8751)^2}{2\pi f}} \sqrt{\frac{EJ}{m}}$$

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where r is the vibration frequency per sec, E the modulus of elasticity (kg/mm^2), J the moment of inertia (mm^4), and m mass per unit length ($\text{kg.sec}^2/\text{mm}^2$). The tests were conducted on a base $N = 10^8$ cycles in the case of the EI617 and ZhS6K alloys, and 10^7 and 10^8 cycles in the case of the VT3-1 alloy. Each fatigue curve was constructed from data obtained on eight test pieces. In the first test of each series a stress equal approximately to $0.5 \sigma_b$ was used, where σ_b is the U.T.S. of the alloy tested; in each subsequent test the applied stress was lowered by 2 kg/mm^2 . The vibration amplitude, A (mm), of the free end of the test piece, required to produce a given stress, was calculated from the formula

$$A = 0.5682 \frac{\ell^2}{Ed} \sigma,$$

where ℓ and d are the length and diameter of the specimen, respectively, E the modulus of elasticity (kg/mm^2), and σ , the applied stress (kg/mm^2). The results are reproduced in Figs. 10-13, where the stress σ_{-1} (kg/mm^2) is plotted against the number of cycles to fracture. The fatigue curves in Fig. 10 relate to alloy EI617, tested at 20°C under the following conditions: (1) testing

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machine of the ГЗМН(GZIP) type (bending of the revolving specimen), load frequency $f = 50$ cycles/sec; (2) testing machine of the П-391 (P-391) type (bending of a revolving specimen), $f = 200$ cycles/sec, (3) testing machine VIU-1 MAI-VIAM (single plane bending), $f = 1000$ cycles/sec. The fatigue curves in Fig.11 relate to alloy ZhS6K tested at 20°C , the testing conditions for curves 1-3 being the same as in Fig.10. The results, reproduced in Fig.12 relate to alloy VT3-1 tested under the following conditions: curve 1 - testing machine VIU-1 MAI-VIAM, $f = 1100$ cycles/sec, $t = 20^{\circ}\text{C}$; curve 2 - same as for curve 1, except $f = 420$ cycles/sec; curve 3 - testing machine GZIP, $f = 50$ cycles/sec, $t = 20^{\circ}\text{C}$; curve 4 - testing machine VIU-1 MAI-VIAM, $f = 420$ cycles/sec, $t = 400^{\circ}\text{C}$. Fig.13 shows the fatigue curves of the VT3-1 alloy, tested at 20°C on the VIU-1 MAI-VIAM machine, curves 1-3 relating to tests carried out at $f = 450$, 1100 and 1650 cycles/sec, respectively; these are the most significant results of the present investigation, showing that the endurance limit of the alloys studied increased with increasing load frequency. Metallographic examination of the fatigue test pieces in the region of fracture revealed no changes in the microstructure

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due to increased loading frequency. The fatigue cracks were trans-crystalline, and only in the zone of final fracture were intergranular cracking and some degree of plastic deformation of the grains observed. It was concluded that both the equipment used and the method employed by the present authors are suitable for fatigue testing under high frequency loading and give reliable results which can be used as design data in the production of turbine and compressor blades, operating under high frequency loads. There are 15 figures, 5 tables and 6 references: 1 Soviet and 5 English. The English-language references read as follows: Lomas T., Ward I., Rait, I., Colbeck E., International Conference on Fatigue of Metals, London, Sept., 1956; Krouse G., Proc. ASTM, 34, 1934, II, 156; Jenkin C. and Lehman G., Proc. Roy. Soc., 125, 1929, 83; Wade A and Grootenhuis P., International Conference on Fatigue of Metals, London, Sept., 1956.

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S/535/61/000/140/005/006
D240/D304

AUTHORS: Sulima, A.M., Candidate of Technical Sciences,
Yevstigneyev, M.I. and Rakhmarova, M.S.

TITLE: Investigating the effect of technological factors on the
endurance of retractor alloys in high-frequency loading

SOURCE: Moscow. Aviatsionnyy institut. Trudy, no. 140. Tekh-
nologicheskiye metody povysheniya kachestva detaley i
uzlov aviadvigateley. 1961, 71-112

TEXT: The authors deal with investigating the effect of 7 different
methods of treatment on the durable strength of the alloys ЭА 617
(EI617) and ЭА 867 (EI867). The methods are: Milling with subsequent
polishing; milling with subsequent grinding; mechanical polishing preced-
ed by grinding and milling; electro-polishing preceded by mechanical
polishing, grinding and milling, etc. A detailed description of the
methods of treatment employed is given, with numerical data, such as
the size of the cutter, velocity etc. [Abstracter's note: The specimens

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Investigating the effect...

are described as "plane and rectangular" in the text but their actual shape is as in Fig. 14]. All tests were carried out on an electro-dynamical vibrator which is described in detail. For heating specimens, in the process of testing, a special high-temperature resistance furnace was used which is also described. Thermal calibration of the specimens was made before testing. After the mechanical treatment, the depth of work hardening and the residual stresses were determined, the former by an X-ray method and the latter by N.N. Davidenkov's method; details of the results are given. The specimens were tested for endurance on bending, with the frequency of resonance vibrations of the order of 850-1000 cycles, at 850°C. Graphs of the results are given. It was found that the endurance depends on the method of treatment and is increased by finishing methods which reduce the residual tensile stresses and the depth of work hardening. The authors recommend electric and mechanical polishing. Thermal treatment also increases the limit of durable strength. There are 26 figures, 5 tables and 15 Soviet-bloc references.

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YEVSTIGNEV, P.H., inzhener; IVANOV, I.T., redaktor; NOVOCHADOV, A.G.,
redaktor; GUROVA, O.A., tekhnicheskii redaktor

[Non-compressor mechanical application of plaster] Beskompessornoe
mekhanizirovannoe nanesenie shtukaturnogo rastvora. Moskva, Izd-vo
Ministerstva kommunal'nogo khoziaistva RSFSR, 1953. 43 p. (MLRA 7:10)
(Plastering)

YEVSTIGNEYEV, P. N. Eng.

Excavation

Efficient utilization of dragline excavator. Mekh. stroi. 10 No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

TEVSTIGHEV P. N. inzhener.

Mobile continuous operation mortar-mixing plant. Stroi.prom.
32 no. 11:17-19 N '54. (MLRA 7:11)
(Mortar) (Mixing machinery)

MEVSTIGNEV, P.N., inzh.

Making multihollow reinforced concrete flooring panels without
using vacuum techniques. *Byul. stroi. tekhn.* 12 no.7:5-7 JI '55.
(MIRA 11:12)

1. Upravleniye dorozhnykh montazhno-stroitel'nykh dorog Mininterstva
putey soobshcheniya.
(Concrete slabs)

YEVSTIGHNEV, P.H., inzhener.

Experience in rapid construction of a two-apartment housing unit.
Transp.stroi. 6 no.10:7-9 0 '56, (MIRA 10:1)
(Apartment houses)

DERKACH, I.M., inzhener. YEVSTIGNEYEV, P.N., inzhener.

Making and using large gypsum slag concrete partitions. Nov. tekhn. i
pered. op. v stroi. 18 no.5:10-13 Ky '56. (MLRA 9:12)
(Walls)

YEVSTIGNEEV, P.

National economy of Czechoslovakia in figures ("1957 statistical
yearbook of the Czechoslovak Republic"; "Position of Czechoslovakia
in the world economy" [both in Czech]. Reviewed by P. Evstigneov).
Vop. ekon. no.3:145-147 Nr '53. (MIRA 11:4)
(Czechoslovakia--Economic conditions--Statistics)

YEVSTIGNEYEV, R., nauchnyy sotrudnik,; OSIPOVA, M., nauchnyy sotrudnik

Improvement of the system of material incentives in Czechoslovak
industry. Sots. trud no. 7:17-22 J1 '58. (MIRA 11:8)

1. Institut ekonomiki AN SSSR (for Yevstigneyev). 2. Ekonomicheskii
institut Chekhoslovatskoy AN (for Osipova).
(Czechoslovakia--Industries)
(Czechoslovakia--Wages)

STARODUBROVSKAYA, Vera Nikolayevna; YEVSTIGNEYEV, R.W., mladshiy nauchnyy
sotrudnik; KALMYK, V.A., red.; GERASIMOVA, Ye.S., tekhn.red.

[Economic union of the working class and the peasantry in the
European people's democracies] Ekonomicheskii soюз rabocheho
klassa i krest'ianstva v evropeiskikh stranakh narodnoi
demokratii. Moskva, Gosplanizdat. 1959. 250 p. (MIRA 12:6)

1. Sektor stran narodnoy demokratii Instituta ekonomiki AN SSSR
(for Yevstigneyev).

(Europe, Eastern--Economic conditions)

YEVSTIGNEYEV, R.N.; STOPOV, A.D., kand.sel'skokhoz.nauk, red.; TO-
MASHPOL'SKIY, L.M., kand.ekon.nauk, red.; SMIRNOVA, A.I.,
vedushchiy red.; GONCHAROV, H.G., tekhn.red.

[Economic development of the Czechoslovak Republic] Razvitie
ekonomiki Chekhoslovatskoi Respubliki. Moskva, Vses.in-t nauchn.
i tekhn.informatsii. 1960. 99 p. (MIRA 13:6)
(Czechoslovakia--Economic conditions)

NEVSTICHNEV, R.

Material encouragement of workers to develop and introduce
new technology in the Czechoslovak Republic. Biul.nauch.
inform.; trud i zar.plata 3 no.6:57-59 '60.

(MIRA 13:6)

(Czechoslovakia--Bonus system)

(Czechoslovakia--Technological innovations)

MIROSHNICHENKO, B.P., otv. red. Prinimali uchastiye: STUPNOV, A.D., red.;
GERTISOVICH, G.B., red.; YEVSTIGNEYEV, R.N., red.; NIKOLAYEV, D.N.,
red.; PONOMAREVA, A.A., tekhn. red.

[Improving the forms of industrial management in the European
people's democracies] Sovershenstvovanie form upravleniya pro-
myshlennost'iu v evropeiskikh stranakh narodnoi demokratii. Mo-
skva, Izi-vo ekon. lit-ry, 1961. 236 p. (MIRA 14:10)

1. Akademiya nauk SSSR. Institut ekonomiki mirovoy sotsialisticheskoy sistemy.

(Europe, Eastern—Industrial organization)

GERTISOVICH, G.; YEVSTIGNEYEV, R.

Problems in perfecting industrial management. Vop. ekon. no.7:
80-89 JI '61. (MIRA 14:7)
(Communist countries--Industrial management)

YEVSTIGNYEV, Ruben Nikolayevich; MIKHAL'CHENKO, N.Z., red.;
PONOMAREVA, A.A., tekhn.red.

[Principle of material self-interest in Czechoslovak industries]
Printsip material'noi zainteresovannosti v promyshlennosti
Chakhoslovakii. Moskva, Izd-vo ekon.lit-ry, 1962. 100 p.
(MIRA 15:5)

(Czechoslovakia—Wage payment systems)
(Czechoslovakia—Cost and standard of living)

KUITA, Frantisek; YEVSTIGNEYEV, R.N. [translator]; SEMENOV, I.I.
[translator]; ZAYTSEV, N.F., red.; KOROTEYEVA, Yu.I., tekhn.
red.; REZOUKHOVA, A.G., tekhn. red.

[Hidden potentialities for increasing labor productivity] Rezer-
vy rosta proizvoditel'nosti truda. S predisl. K.I. Klimenko.
Moskva, Izd-vo inostr. lit-ry, 1962. 249 p. (MIRA 16:1)
Translated from the Czech.

(Agricultural machinery industry—Labor productivity)

YEVSTIGNEYEV, R.

Material incentives in the industry of the European people's
democracies. Vop.ekon. no.4:101-106 Ap '63. (MIRA 16:4)
(Europe, Eastern--Bonus system)
(Europe, Eastern--Industrial management)

YEVSTIGNEYEV, R. N.

Dissertation defended for the degree of Candidate of Economic Sciences in
the Institute of World Economic and International Relations

"Principle of Material Interest in the Industry of Czechoslovakia."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

MARKARYAN, E.A.; YEVSTIGNEYVA, R.P.; PREOBRAZHENSKIY, N.A.

Synthesis of β -substituted glutaric acid esters. Zhur. ob. khim.
32 no.1:140-142 Ja '62. (MIRA 15:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V.Lomonosova.

(Glutaric acid)

PYATNOVA, Yu.B.; SMIRNOV, L.D.; VASIL'YEVA, L.V.; MYAGKOVA, G.D.; GOL'TSEVA,
Z.V.; YEVSTIGNEYEVA, R.P.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Production of 5,8,11,14-eicosatetraenoic (arachidonic) acid.
Zhur. ob. khim. 32 no.1:142-144 Ja '62. (MIRA 15:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V.Lomonosova.

(Eicosatetraenoic acid)

L 35392-66 EWT(m)/EWP(j)/T DS/RM
 ACC NR: AP6026816 SOURCE CODE: UR/0020/66/167/001/0135/0138
 AUTHOR: Savel'yev, D. A.; Sidorov, A. N.; Yevstigneyeva, R. P.; Ponomarev, G. V. 50
 ORG: none 49
 TITLE: Dark and photochemical¹ reduction of metal derivatives of a number of porphins 3
 SOURCE: AN SSSR. Doklady, v. 167, no. 1, 1966, 135-138
 TOPIC TAGS: photochemistry, chemical reduction, pyridine, methanol, hydrazine, atom, hydrogenation, chlorine compound
 ABSTRACT: The relationship of the reduction of porphin type molecules to the presence and nature of a central metal atom was investigated in the following porphin metal derivatives: M-TFP (M = Zn, Mg, Cd, Cu, Ni), Zn- and Cu-TMP, Zn- and Mg-EP (TFP = meso-tetraphenylporphin, TMP = 1,4,5,8-tetramethylporphin, ED = ethioporphin-1).
 Photo-reduction was conducted under vacuum in pyridine and methanol at pigment concentrations of 10-5 mole/liter in the presence of hydrazine (1-2 moles/liter) or H₂S with 500 mm Hg equilibrium gas pressure over the solution. Illumination of the solutions was done with the total light of a 500 watt incandescent lamp equipped with a reflector and condenser.

UDC: 535.343:541.143
 0016 2562

Card 1/2

L 35392-66

ACC NR: AP6026816

The effect of the central metal atom in the pigment molecule is different in dark and photochemical reduction reactions. In dark reaction with hydrazine, the hydrogenation of the pyrrole rings occurs equally successfully in Cu-, Ni- and Zn-containing pigments, depending more on the character of the peripheral substituents than on the central metal atom. In the photochemical interaction, only the Zn- and Mg- derivatives (and, possibly, Cd-derivatives) appear active, regardless of the nature of the substituent in the 1-8 positions (in the limits of the compounds studied), but the Cu- and Ni-derivatives appear inactive. Upon comparing the Zn- and Mg-containing pigments, the photo-hydrogenation of the pyrrole rings occurs in Zn-derivatives in the presence of hydrazine, with the formation of the corresponding chlorines and bacterio-chlorines, but it does not occur in Mg-derivatives. It can be assumed that such differences in the metal-containing pigments are caused either by their special properties in optically stimulated states, or by their dissimilar capacity for complex formation with molecules of the medium. This paper was presented by Academician A. N. Terenin on 15 May 1965. Orig. art. has: 4 figures. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: 05May65 / ORIG REF: 005 / OTH REF: 005

Card 2/2

S. I. YEVSTIGNEYEV

"Perfection of the Technology of Cataphoretic Coating of Heaters for the Purpose of Eliminating Pits" from Annotations of Works Completed in 1955 at the State Union Sci. Res. Inst. of Radio Engineering Ind.

So: B-3,080,964

YEVSTIGNEYEV, S. I.

Cand Tech Sci - (diss) "Means of improving the cataphoretic coating of pre-heaters with alundum." Moscow, 1961. 16 pp; with diagrams; (Moscow Order of Lenin Technological Chemistry Institute D. I. Mendeleyev); 150 copies; price not given; (KL, 10-61 sup, 214)

YEVSTIGNEYEV, S. N.

Belen'kiy, N. G., Kuznetsov, I. M., and Yevstigneyev, S. N. "Academician Mikhail Iudovich D'yakov (Zootechnologist) on his seventieth birthday and 45th year of scientific-scholastic and general achievement," Vestnik zhivo-novodstva, 1948, Issue 6, p. 103-10, with picture - Bibliog: "List of scholarly treatises of noteworthy scientific quality, doctor of sciences, academician of medical practice, laureate of the Stalin prize, M. I. D'yakov," p. 107-10

SO U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

LYSENKO, T.D.; OL'SHANSKIY, M.A.; SINYAGIN, I.I.; GLUSHCHENKO, I.Ye.;
 VAIJUMTSYAN, I.S.; PREZENT, I.I.; SHCHERBINOVSKIY, N.S.; SHUNKOV,
 V.I.; YEVSTIGHEYEV, S.N.; BOCHEVER, A.M.; LITVIN, V.M.; TAYEDVA,
 A.G.; PODVOYSKIY, I.I.; SAKS, Ye.I.; KHALIFMAN, I.A.; FEYGINSON,
 N.I.; SHCHEGLOVA, Yu.N.; DLUGACH, G.V.; STERNIN, R.A.; LISOVSKAYA,
 O.V.; GUBINA, T.I.; ROZENFELD, M.I.; TSVETAYEVA, Ye.M.; PARKHO-
 MENKO, Ye.V.; NEYMAN, N.F.

Sofia Iakovlevna Voitinskaya; an obituary. Agrobiologiya no.4:121
 J1-Ag '58. (MIRA 11:9)
 (Voitinskaya, Sofia Iakovlevna, 1898-1958)

YEVSTIGNEYEV, T. A.

Yevstigneyev, T. A. "A study of the changing factors of infection of the ovaries and oviducts as affecting chickens," Trudy Nauch.-issled. in-ta ptitsevodstva, Vol. XIX, 1948, p. 292-303.

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

YEVSTIGNEYEV, T.A.

Yevstigneyev, T.A. "Examination of the essential methods of combatting Persian ticks and investigation of new methods for their prevention," Trudy Nauch.-issled in-ta ptitsevodstva, Vol. XIX, 1948, p. 304-26 - Bibliog: 8 items

SOi U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

YEVSTEGNEYEV, T. A.

Yevstegneyev, T. A. - "The use of hexachlorane for eradicating ticks on fowl, (Report),
Sov. zootekhnika, 1949, No. 1, p. 109.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

YEVSTIGNEYEV, T. A.

Cand Agricult Sci

Dissertation: "Development of the Methods for Utilization of Hexachlorane in the Struggle Against the Ectoparasites of Domestic Birds and Their Practical Application in Poultry Farms." 8/12/50

Sci Res Inst of Agriculture, Ministry of Agriculture, RSFSR
Aviculture

SO Vecheryaya Moskva
Sum 71

YEVSTIGNEYEV, V.

Utilize productive capacity better. Sov. profsoiuzy 7 no. 7:62-
64 J1 '58. (MIRA 11:8)

(Moscow--Rubber industry)

Y. E. VOSTOKOV, V. V.
SOKOLOVSKIY, A.; YEVSTIGNEYEV, Y.

Plant fund and its use. Sov. profsoyuzy 5 no. 5:74-78 Ky '57.
(Industrial relations) (Incentives in industry) (MIRA 10:6)

YEVSTIGNEYEV, V.

Make wider use of reclaimed wool. Meat.prom. i khud.promys. 4 no.2:
18-19 F '63. (MIRA 16:8)

1. Zamestitel' nachal'nika Upravleniya legkoy promyshlennosti Gosudarstvennogo komiteta Soveta Ministrov RSFSR po delam mestnoy promyshlennosti i khudozhestvennykh promyslov.

YEVSTIGNEYEV, V.A.

Transportation problem with respect to time in the theory
of graphs. Dokl. AN SSSR 157 no.4:814-815 Ag '64
(MIRA 17:8)

1. Institut matematiki Sibirskogo otdeleniya AN SSSR. Predstav-
leno akademikom S.L. Sobolevym.

PROCESSER AND PROPERTIES INDEX	
<p>Ca</p>	<p>Reduction of alkaline copper solutions by sucrose. V. H. Rostigney. <i>Trudy Fizikal. Nauch. Instituta. Inst. Khimichesk. Prom.</i> 1919, No. 1, 3-26. — Sucrose, by acting as a reducing sugar under severe conditions, introduces a variable but serious error in detg. invert sugar or other reducing sugars with Fehling soln. It tends to form Ca saccharate either in presence or absence of invert sugar. This explains the decreasing influence of K Na tartrate and the increasing influence of cupric ion as the reaction proceeds. Tabulated data and curves show the oxidation behavior of sucrose as the only sugar in the system, and in presence of invert sugar. To inhibit oxidation of sucrose during analysis the alk. and cupric-ion concn. should be low, K Na tartrate concn. should be high and the mildest possible time and temp. conditions should be employed. Thus, when Fehling soln. made with standard NaOH soln. 10, standard CuSO₄ soln. 10, H₂O 20 cc. and K Na tartrate 0 g. is used to analyze a soln. contg. 50 mg. invert sugar and 5 g. sucrose, the error is about 100%. A modified Fehling soln. contg. standard NaOH soln. 10, standard CuSO₄ soln. 10, H₂O 20 cc. and K Na tartrate 20 g. gives satisfactory accuracy, the reagent soln. being boiled 3 min. in both cases. The error is not directly proportional to sucrose concn. but follows a curve which rises rapidly at first, then approaches a const. level.</p> <p style="text-align: right;">Julian P. Smith</p>
<p>ASB-51A DETAILING LITERATURE CLASSIFICATION</p>	
<p>SEARCHED 92</p>	<p>INDEXED 92</p>

12

Ca

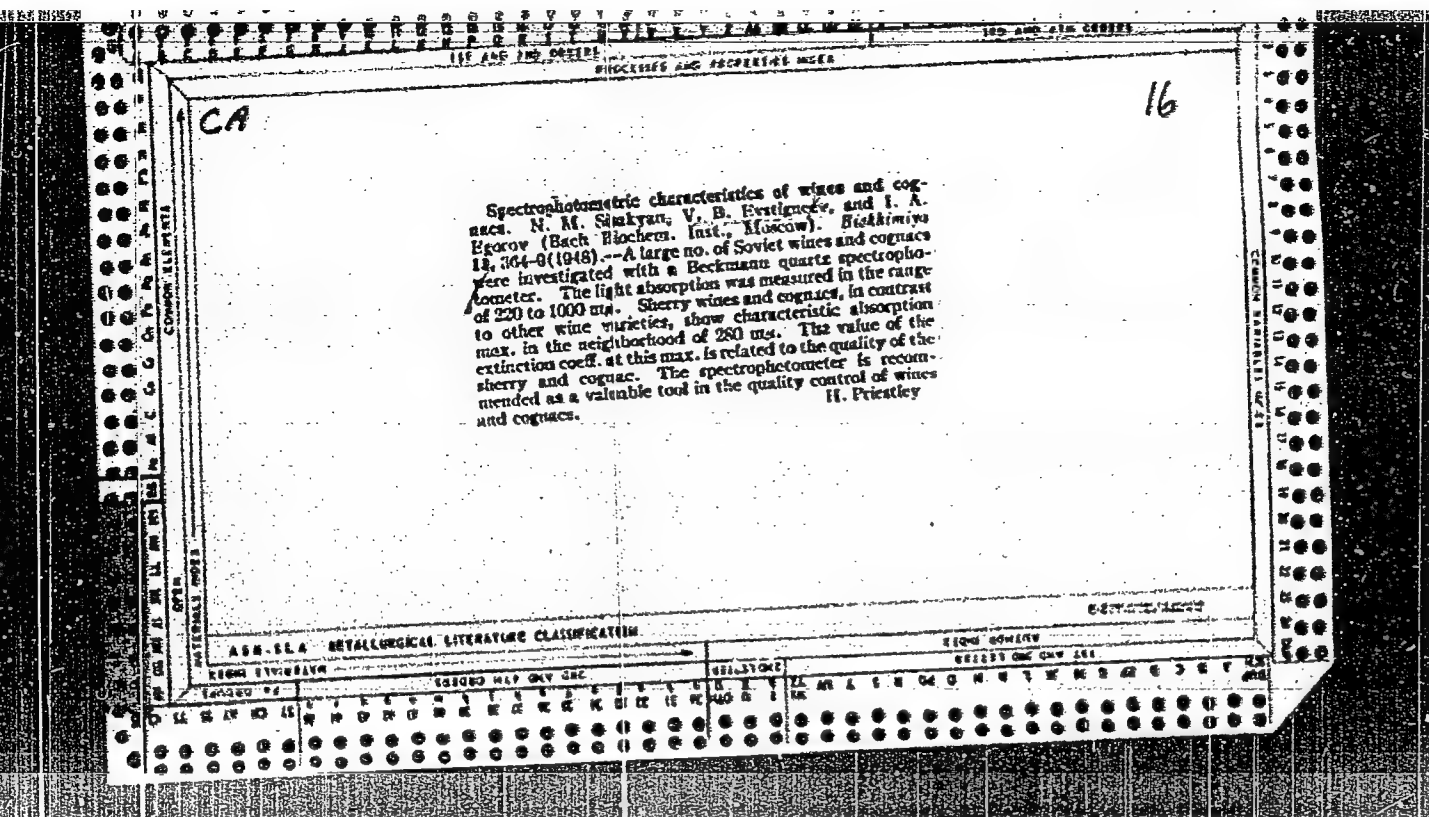
Electrometric methods of analytical control in the confectionary industry. V. H. Kinsinger. *Anal. Chem.* 1930, No. 1, 82-118. — Methods and app. for potentiometric detn. of acidity, conductometric analysis of invert sugar, conductimetric indication of the end point in boiling fruit or berry juices and detn. of moisture in powders from the drier. coats, are reviewed, with illustrated descriptions. Tabulated data and curves show the numerical relations on which the methods are based. 51 references.

Julian P. Smith

3

CA

Absorption spectra of magnesium phthalocyanine. V. B. Evtugunsky and A. A. Krasnovskii (A.N. Bakh Biobchem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 58, 417-20 (1947).—Mg phthalocyanine crystd. from pyridine retains 2H₂O and free phthalocyanine which cannot be removed even by sublimation in vacuo. The free phthalocyanine can be removed by agitation with Me₂CO until intense color appears and the soln. on evapn. gives a pure Mg deriv. The following max. were obtained: in Me₂CO 663, 638, 601, 344 mμ; in EtOH 668, 640, 605, 344, 283; in Et₂O 668, 638, 601, 244; in pyridine 673, 647, 608, 340; in dioxane 666, 638, 602, 344; in C₆H₆ 672, 648, 608, 346; in MePh 672, 648, 609, 340; in 1,2,4-tetrahydronaphthalene 672, 646, 609, 347; in 1-BrC₆H₅ 678, 649, 613, 355; in solid film 630, 335, 290. The spectra resemble those of chlorophyll in band positions and intensities. G. M. Kosolapoff



USSR/Chemistry - Chlorophylls, Fluorescence May 1948

Chemistry - Phthalocyanine, Magnesium Derivatives

"The Attenuation of the Fluorescence of Magnesium Phthalocyanine and Chlorophyll by Foreign Molecules," V. B. Yevstigneyev and A. A. Krasnovskiy, Inst Biochem imeni A. N. Bakh, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LX, No 4

Description and results of subject experiments. Fluorescence attenuations of magnesium phthalocyanine and chlorophyll are similar, which proves that effect is not connected with labile hydrogen atoms in chlorophyll molecule and shows resemblance between tetraazeporphin and porphin systems of conjugate double bonds. Molecule oxidizers with electron affinity (quinone, oxygen) greatly attenuate fluorescence, pigments investigated while reducers (hydroquinone, ascorbic acid, NaI and KI) are far less active. Submitted 12 Feb 1948.

7756

YEVSTIGNEYEV, V.B.

CF

Quenching of fluorescence of magnesium phthalocyanine and of chlorophyll by extraneous molecules. V. B. Rytiginskii and A. A. Krasovskii. *Doklady Akad. Nauk S.S.S.R.* 60, 621-6 (1948).—The dependence on the nature of the solvent of the fluorescence, excited in the absorption max., 668 mμ for Mg phthalocyanine (I) and 684 mμ for chlorophyll (a + b) (II), in the concn. range of max. intensity of fluorescence (0.25–0.30 × 10⁻⁴ M) is illustrated by the data (intensities in relative units): at 7°, I in EtOH 95%, Me₂CO and C₆H₆, 61.6, 70.8, and 35.8, resp.; II, 40.5, 50.8, and 32.0. The following quenching efficiencies, in soln. in 95% EtOH, are expressed in % remaining of the original intensity, i.e. taking that of the pure O₂-free soln. as 100: I, at 7°, with O₂, 80.5%; at 16°, with quinone 0.0019, 0.0065, 0.016, 0.034, 0.066, and 0.122 M, 90.5, 70, 54, 33.5, 23.5, and 20.5%; at 12°, with hydroquinone 0.039, 0.129, and 0.268 M, 88, 90, 77.5, 59.5%; II, at 7°, with O₂, 80.5%; at 12°, with quinone 0.0019, 0.055, 0.016, 0.031, 0.065, and 0.147 M, 95, 84, 63, 49, 30, and 22%; at 21°, with hydroquinone 0.061, 0.105, 0.328, 0.568, 1.10 M, 100, 90, 84.5, 92, and 86.5%. Quenching by O₂ diminishes with increasing H₂O content in the EtOH; in the presence of 25% H₂O, no quenching is noticed. This is evidently due to the lesser soly. of O₂ in H₂O. No quenching of the fluorescence of either I or II

was observed with KI, NaI, or ascorbic acid in aq. soln. in alc., but distinct quenching of II is found at high contents of KI or NaI in solns. contg. 20–25% H₂O. Absence of chem. interaction between the fluorescing substance and the quencher was tested by the constancy of the extinction coeff. *E* (in 668 and 684 mμ for I and II, resp.): shifts well in excess of the possible expl. error were observed on addn. of quinone; thus, for I, *E* (under 1 cm) changed from 0.530 to 0.521 with quinone 0.065 M, for II, from 0.282 to 0.232. However, addn. of quinone does not noticeably change the position of the max. or *E* in the ultraviolet for I, in the blue-violet for II. Evidently, I and II behave alike with respect to quenching of their fluorescence. (Only oxidants (O₂, quinone) have a marked quenching effect; reducing agents are much less active.

N. Thon

31

3

Effect of oxygen on absorption spectrum and fluorescence of chlorophyll solutions. V. H. Kravtsov, V. A. Lavrikova, and A. A. Kramovskii. *Doklady Akad. Nauk S.S.S.R.* 60, 1133-6 (1949).

Revacuation of air above toluene solns. of chlorophyll-a and -b results in a small drop of absorption intensity at both maxima and a 2-3-mu shift of the red band to the long-wave end; in chlorophyll-b the 665-70 band increases in intensity; readmission of air restores the spectrum to near-normal values, while for the 360-380 band the band shift takes place only partially reversibly. Many cycles lead to progressive decline of extinction coeff. in toluene, CCl_4 , and heptane; O-contg. solvents gave increased absorption on evacuation, proportional to vol. decrease (evapn.) and gave no change on air admission. Fluorescence declines on evacuation and partially rises on air admission with a + b form, while b form gives complete recovery. A trace of HCl , $MeCl$, or pyridine in toluene soln. cancels the variation of extinction on evacuation and air readmission. Hence, interaction of O with chlorophyll shortens the duration of the active state of the latter and serves to depolymerize the dimeric form of chlorophyll (which does not fluoresce).

(I. M. Kozolapov)

ASR-11A METALLURGICAL LITERATURE CLASSIFICATION

14-0002

Section 1000-0000

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YEVSTIGNEYEV, V.B.; NIKIFOROVA, V.N.

Modification of the ultraviolet absorption spectrum of aqueous glucose solutions in warming. Biokhimiia, Moskva 15 no.1:86-93 Ja-F '50.
(CLML 19:3)

1. Institute of Biochemistry imeni Bakh of the Academy of Sciences USSR, Moscow, and the All-Union Scientific-Research Institute of the Confectionery Industry, Moscow.

CH

3

Influence of extraneous molecules on the absorption and fluorescence spectrum of magnesium phthalocyanine and of chlorophyll in solution. V. B. Rostigacev, V. A. Gavrilova, and A. A. Krasnovskii (A. N. Bakht. Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 70, 201-40 (1960); cf. C. A. 45, 1872a. The decrease of the intensity of fluorescence of a soln. of chloro-

phyll in toluene on evacuation, and its restoration on admission of air, is due not to O_2 alone but primarily to H_2O vapor. Carefully dried O_2 has no effect on the fluorescence of the preliminarily outgassed soln. H_2O vapor alone was found to increase the intensity by a factor of 1.4; simultaneous presence of O_2 lowers this increase by about 15-20%. Consequently, O_2 quenches the fluorescence of a chlorophyll soln. in the presence of H_2O , also in a toluene soln. The effect of H_2O is not specific, but is common to a series of polar substances such as $EtOH$, C_2H_5N , Me_2CO , and aniline. The fact that dry O_2 has no quenching action, can be explained by the superposition of an activating and a quenching effect. It must be assumed that O_2 has a similar action as H_2O , only to a much lesser degree. In contrast to chlorophyll, soln. of phthalocyanine (free from Mg) in toluene, shows no change either of the fluorescence or of the absorption spectrum on evacuation or admission of air. However, Mg phthalocyanine in toluene shows a behavior analogous to that of chlorophyll; but the spectrum of Mg-free phthalocyanine in toluene is insensitive to outgassing or admission of air. Evacuation or admission of air does not affect the absorption max. at 680 and 695 m μ belonging to metal-free phthalocyanine, but the absorption max. at 672 m μ , which belongs to the Mg phthalocyanine complex, is decreased by evacuation, and increases again when air is admitted. Consequently, the detg. factor is the presence or absence of Mg as central atom. Substances which enhance the fluorescence of chlorophyll are coordinatively bound with the Mg atom. Possibly, this binding results in a disson. of the non-fluorescing dimer into fluorescing monomers, or in the formation of complex. between the chlorophyll and polar mol's.

N. Thon

1957

CA

10

Effect of the pH of the medium on the decomposition of glucose solutions on heating. V. H. Ryabukh and V. N. Nikiforova. *Doklady Akad. Nauk S.S.S.R.* 73, 523 (1970).—Ultraviolet absorption spectra were taken of glucose solns. boiled 30 hrs. at pH 2-9 (initially adjusted by addn. of HCl or NaOH); in all cases 2 bands, 230 and 282.5 mμ, were observed (the curves are reproduced) but the intensities underwent a profound change. The 230 mμ band develops most slowly at pH about 3 and the 280 mμ band has the least intensity at pH 4-6, both after boiling 1 hr. The latter band undergoes moderate frequency shifts with changes of pH; it is believed that the peak of 275-80 mμ corresponds to glucose with a free carbonyl group, while that of 282.5 mμ corresponds to (hydroxymethyl)furfural, which does not form at pH higher than 4.5-5.0. The results indicate that if the original pH is above 5, (hydroxymethyl)furfural forms rapidly only after the acidic products of decomposition, lower the pH below that figure; the total decomposition of glucose is accelerated at pH above 5-6 owing to the presence of the free carbonyl form, while an acceleration below pH 3-4 is caused by rapid and extensive dehydration. The formation of the carbonyl form is facilitated by higher pH; the product loses H₂O on heating and yields the primary decomposition products absorbing at 230 mμ, but further dehydration to (hydroxymethyl)furfural is retarded by increased pH and is accelerated only if the pH is under 4-5. The intersection point of the 2 curves representing these factors lies at about pH 5 in brief heating periods at 100-2°, while for longer expts. it is about pH 3. These concepts have been confirmed by boiling glucose solns. 1 hr. at pH 3.05, 4.80, and 8.14, then adjusting to pH 1.5 by HCl and boiling 0.5 hr. longer; the absorption intensities at 282.5 and 230 mμ showed a progressive rise with the pH of the initial soln., an especially high value being obtained from the pH 8.14 soln.

G. M. Kosolapoff

34

Quenching of the fluorescence of chlorophyll and of magnesium phthalocyanine in their interaction with quenchers. V. B. Eretinger, V. A. Gavrilova, and A. A. Krasovskii (Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 74, 315-18 (1950).—The following degrees of quenching of the intensity of the fluorescence of (a + b) chlorophyll soln. in EtOH were observed (quenchers 0.1 M): PhNO, 68; *m*-C₆H₄(NO)₂, 87; I, (0.005 M) 83; PhNMe, 28%; in pyridine, *p*-C₆H₄, 94.5; PhNO, 37; *m*-C₆H₄(NO)₂, 78%; in toluene, *p*-C₆H₄, 93; PhNO, 29; *m*-C₆H₄(NO)₂, 75%. The corresponding data for the quenching of the fluorescence of Mg phthalocyanine, are, in EtOH, PhNO, 70; *m*-C₆H₄(NO)₂, 81; I, (0.005 M) 58; PhNMe, 23; PhNO, 71%; in pyridine, *p*-C₆H₄, 96; *p*-C₆H₄(OH), 6; PhNO, 31; *m*-C₆H₄(NO)₂, 80; PhNMe, 4; PhNMe, 37%; in toluene, *p*-C₆H₄, 90; PhNO, 50; *m*-C₆H₄(NO)₂, 81; PhNMe, 17%. Strong quenchers are, without exception, oxidants; reductants either do not quench at all or quench only very weakly. Simultaneous deins. of the extinction in the red max. show that the strongly oxidizing quenchers, O₂

and *p*-C₆H₄O₂, are practically without effect on the absorption spectrum, whereas I, and *m*-C₆H₄(NO)₂, decrease the absorption max. markedly. Under strong illumination through a red filter, chlorophyll soln. in EtOH react strongly with O₂ (as evidenced by the rapid decrease of the red absorption max. with the length of exposure), hardly with *p*-C₆H₄O₂ and *p*-C₆H₄(OH), but do react with ascorbic acid, which is without effect in quenching of fluorescence. Nor does *p*-C₆H₄O₂ show any significant photoactivity in toluene soln. In pyridine soln., the photoactivity is most intense with ascorbic acid, less intense with O₂, and still less with *p*-C₆H₄O₂. Consequently, there is no direct correlation between the ability of a substance to quench fluorescence and its photoactivity with chlorophyll. The absence of any rapid reversible photochem. reaction between chlorophyll soln. ($\sim 10^{-6}$ M) in EtOH, pyridine, or toluene, and quinone (0.1 M) was ascertained by illumination at right angle to the direction of the spectrophotometric observation. The absence of a relation between quenching and photochem. reactivity indicates that the latter is detd. not by the electronic excited state (10^{-10} sec.) but by the long-lived binuclear triplet state. N. Thon

YEVSTIGNEYEV V B

[illegible]

The role of photochemical oxidation and reduction reactions in the degradation of organic and inorganic materials and its application in the treatment of wastewater is discussed. The role of photochemical oxidation and reduction reactions in the treatment of wastewater is discussed. The role of photochemical oxidation and reduction reactions in the treatment of wastewater is discussed.

USSR/Chemistry - Photosynthesis Nov 51

"Photoelectrochemical Effect of Phthalocyanines, Chlorophyll, and Pheophytin," V. B. Yevstigneyev, Acad A. N. Terent'ev, Lab of Photobiology, Inst of Biochem Imeni A. N. Bakht, Acad Sci USSR

"Dokl Ak Nauk SSSR" Vol LXXXI, No 2, pp 223-226

Using special cell described in text, measured photo-potentials of phthalocyanines, chlorophyll I, and pheophytin II. Using double layers of the pigments with opposite sign of potential, established that photoelectrochem effect is due to interaction between pigment film and electrolyte soln. Effect of different wave lengths varies with 19917

USSR/Chemistry - Photosynthesis (Contd) Nov 51

Intensities of absorption by pigment. Potential changes with redox action of electrolyte and substances dissolved in it. Investigated action of O_2 , quinone, hydroquinone, ascorbic acid, hydro-sulfite, and sulfite. Electrochem behavior of I and II under the same conditions differs in a manner which confirms data on the easier photoreducibility and more difficult photooxidability of II as compared with I, indicating possible participation of Mg atom in these processes.

19917

YEVSTIGNEEV, V. B.

CA

The photoelectrochemical effect of phthalocyanins, chlorophyll, and pheophytin. V. H. Evstigneyev and A. N. Titorenko (A. N. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 81, 223-6 (1951).—The substances chlorophyll (a + b) and (a) and (b), pheophytin, and phthalocyanin and its Mg complex were deposited on one of the 2 Pt electrodes by electrophoresis, by evapn. of an ether soln., or by vacuum distn. (in the case of the phthalocyanins), and the potential (E) of the coated electrode was measured in a neutral KCl soln. on illumination. Illumination produced a change of E in the pos. direction, except with phthalocyanin, where the change of E was neg. The magnitude of the change (ΔE) of E is proportional to the absorbed light intensity. The wave length which produces the photoelectrochem. effect coincides with the absorption spectrum of the film in the visible and near ultraviolet. Expts. with composite layers of substances giving ΔE of opposite signs proved that the effect is localized in the outer layer in contact with the electrolyte. Participation of dissolved O_2 in the establishment of the photo- ΔE is demonstrated by the fact that evacuation of air decreases the pos. ΔE . Dissolved quinone acts in the same way as dissolved O_2 .

Adm. of reductants, such as Na_2SO_3 , Na_2S , SO_2 , hydroquinone, or ascorbic acid, either decreases the pos. ΔE or renders it neg. With the alc.-lnsol. phthalocyanins, expts. in alc. soln. gave the same results as in aq. soln. With phthalocyanins, ΔE is always pos., and higher in acid than in alk. soln. Chlorophyll and pheophytin in alk. soln. showed a neg. ΔE . When chlorophyll and pheophytin have ΔE of the same sign (neg. in alk., and pos. in acid soln.), the pos. ΔE is much higher with chlorophyll and the neg. ΔE lower in pheophytin. This is in keeping with the previously observed (cf. C.A. 45, 2781i), easier photoreducibility and more difficult photooxidizability of pheophytin as compared with chlorophyll. Similar effects were observed on graphite electrodes, but the effects were much smaller than on Pt.

S. Thon

CA

Change of the absorption spectrum of solutions of fructose on heating. V. B. Kostigov and V. N. Nikiforova (A. N. Bakh. Khim. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 81, 1051-1053 (1951); cf. C.A. 45, 1934c. Boiling an aq. soln. of fructose 30 hrs. causes a progressive change of the absorption spectrum. Extinction coeffs. of initially weak bands at 241 and 241 m μ rise rapidly; the change is most pronounced in the former band. In comparison with changes in glucose solns. the change is some 7 times more rapid. The spectrum after 30 hrs. is very close to that of hydroxymethylfurfural. The pH of the medium alters the rate of change. The change of the abs. max. at 241 m μ shows a min. at pH 3; that of 241 m μ , at pH 4-5, is about 10% with indication of a shift to pH 3 for longer runs. G. M. Kowalski

1. MEVSTICNEYEV, V.B.
2. USSR (600)
4. Spectrum Analysis
7. Influence of the solvent on the absorption spectrum of chlorophyll solutions.
Biokhimiia 17. no. 5. 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

11-D

CA

Isolation of phycoerythrin from red alga, and its spectral and photochemical properties. A. A. Krasnovskii, V. B. Krut'ko, O. P. Bria, and V. A. Gavrilova (A. N. Bakh Institute, Leningrad, USSR). *Doklady Akad. Nauk S.S.S.R.* 62, 947-50 (1962).—The best source from which phycoerythrin can be extracted by 24-hr. treatment with H_2O is *Chlorella vulgaris*. The product can be isolated by pptg. proteins with $(NH_4)_2SO_4$ and chromatographing on tricalcium phosphate, the raspberry-colored band of phycoerythrin being found above the blue phycocyanin band. Washing (development) with 0.15 M NaH_2PO_4 is satisfactory. Ultracentrifuge studies show that the soln. contains 2 protein components, $S_{20} = 13.07 \times 10^{-11}$ sec. and 4.08×10^{-11} sec., mol. wts. being about 300,000 and 60,000, resp. Tiselius electrophoretic technique gives one sharp and one shallow peak. At isoelectric point of pI 4.3, the intensity of absorption is least. The main absorption max. at 575 m μ is highest at pI 7.5. The 665-m μ absorption band follows Beer's law. The substance displays fluorescence without concentrational quenching. Photooxidation in air is negligible in aq. soln., but EtOH, dioxane, or pyridine accelerates it considerably; during oxidation the absorption max. at 665 and 640 m μ decline more rapidly than at 495 m μ , possibly owing to destruction of link between protein and erythroblin. Expts. with photoreduction of phycoerythrin by ascorbic acid showed stability of the compd. in this respect. The substance is not capable of realization of the isolated chloroplast reaction (photochem. evolution of O_2 of H_2O), coupled with reduction of quinones; not only that, but it actually hinders the spontaneous oxidation of ascorbic acid and it cannot participate in H transfer from ascorbic or pyruvic acid to riboflavin, etc. Proteolytic enzymes can liberate erythroblin, red, which oxidizes in air to blue product, probably corresponding to cyanobilin. A dialyzed soln. of phycoerythrin hydrolyzed by 15% HCl in the absence of air and treated with $AmOH$ gives erythroblin in the org. phase; the product shows absorption max. at 495 m μ , its oxidation product at 600 m μ . O. M. K.

YEVSTIGNEYEV, V. B.

USSR/Chemistry - Chlorophyll

Aug 52

"Comparison of Spectral Properties of Chlorophyll and Pheophytin in Various Solvents," V. B. Yevstigneyev and V. A. Gavrilova, Inst. of Biochem Imeni A. N. Bekh, Acad Sci USSR

"Dokl. SSSR" Vol 85, No 5, pp 1073-1076

The absorption spectra of chlorophyll (a + b) and pheophytin (a + b) were measured in ethyl ether, acetone, pyridine, ethanol, toluene, and benzene. The fluorescence intensity and extinction also detd. The effect of the solvent on both pigments is not always the

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same. The λ_{max} in the mol plays an important role in modifying the properties involved. Submitted by Acad. A. N. Terent'ev 10 Jun 52.

239123

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YEVSTIGNEYEV, V.B.; GAVRILOVA, V.A.

Effect of some substances on the rate of photooxidation of chlorophyll a.
Doklady Akad. Nauk S.S.S.R. 89, 523-6 '53. (MLBA 6:3)
(CA 47 no.16:8195 '53)

1. A.N.Bakh Blochem. Inst., Moscow.

KORCHEMKIN, F.I.; ZHEREBOV, L.P.; YEVSTIGHNEV, V.B.

The nature of some substances of the cambial juice of *Pinus silvestris*.
Doklady Akad. Nauk S.S.S.R. 90, 429-31 '53. (MLRA 6:5)

(CA 47 no.17:8839 '53)

1. A.M. Bakh Biochem. Inst., Moscow.

Chem. Abs. V. 48
1-25-54
Electron. Phenomena.

The following is a summary of the work of Chlopyll and b
Koushik, K. A. and A. K. Koushik, *Chlopyll Akaa.*
Koushik, K. A. and A. K. Koushik, *Chlopyll Akaa.*
Koushik, K. A. and A. K. Koushik, *Chlopyll Akaa.*
Chlopyll A and B are reversibly reduced by PhNHNH_2 in
toluene solns forming semiquinonoid reduced forms of these
pigments, which appear to exist in 2 forms: dissociated and
undissociated, which differ in their absorption spectra. When a
rapid form of the spectrum of a soln. of chlorophyll a is
made in toluene in the presence of PhNHNH_2 after evacuation
and 2-min. irradiation, the resulting curve has 4 max.
at 518, 595, 665-70, and 415 m μ . When the soln. is per-
mitted to stand in the dark, the spectrum changes slowly:
the 670 peak increases, that at 518 declines in intensity,
while the 595 max. rises briefly then declines in intensity.
Admission of air averages these changes. While the original
red max. of chlorophyll is 668 m μ , the reverse dark re-
action brings about a max. formation at 670 m μ , indicating
pheophytinization. The curve of the final oxidation prod-
ucts is that of pheophytin a. In the presence of pyridine
the 595 m μ band forms and appears. EtOH acts similarly, but
4- H causes a decline of the 518-m μ max. and increase of
595 and 665 m μ maxima. Thus the 518- and 665 m μ max.
belong to 2 distinct substances: dissociated and undissociated
forms of the reduction products. The reduced form of
chlorophyll a shows fluorescence; excited by a Hg lamp it
is orange-red with a definite band at 600-36 m μ ; on cooling
with liquid N. 2 green bands also appear (525-45 and 660-70
m μ). The latter 2 bands form only from reduced chloro-
phyll a which shows the 518 m μ band. The similarly
treated specimens of chlorophyll b has max. at 545 and 436
m μ , probably caused by dissociated and undissociated forms of
semiquinones. Upon standing in the dark the pheophytiniza-
tion does not occur and the final spectrum agrees com-
pletely with that of the original green chlorophyll b. Fluores-
cence of reduced chlorophyll a is more red than that of
chlorophyll b.

GOODWIN, Trevor Walworth; YEVSTIGNEYEVA, V.B. [translator]; BLAGO-
VESCHENSKIY, A.V., professor, redaktor; ENDEH, M.G., redaktor;
KORNILOV, B.I., tekhnicheskii redaktor.

[Comparative biochemistry of the carotenoids. Translated from the
English] Sravnitel'naya biokhimiya karotinoidov. Perevod s angliisko-
go V.B.Evstigneeva. Pod red. i s predisl. A.V.Blagoveshchenskogo.
Moskva, Izd-vo inostrannoi lit-ry, 1954. 396 p. (MLBA 8:2)
(Carotenoids)

YEVSTIGNEYEV, V B

Metallurgical or aromatic substances in the initial sap of

YEVSTISNEYEV, V.B.

YEVSTIGNEYEV, V.B.; GAVRILOVA, V.A.

Initial stage of chlorophyll photoreduction. Dokl. AN SSSR 95 no.4:
841-844 Ap '54. (MLRA 7:3)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR.
(Chlorophyll) (Photochemistry)

YEVSTIGNEYEV, V. B.

USSR/Chemistry - Biochemistry

Card : 1/1

Authors : Evstigneyev, V. B. and Gavrilova, V. A.

Title : Photo-reduction of a and b-pheophytines

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1201 - 1204, June 1954

Abstract : Pheophytines like chlorophylls submit to photo-reduction in the presence of organic bases but the rate of the photo-reduction process for a and b-pheophytines is considerably higher than for a and b-chlorophylls. The reduction process and results obtained are described. Four references. Graphs.

Translated from the Russian by the A. M. Rakh Institute of Biochemistry

VEYSEYNEV, V. B.

... of some dyes sensitized by
... related to it. (B. Vysugney
... from Inst. Shorben, Acad.
... of the Acad. Sci. USSR
... and Vondovskaya, 1961)
... which support
... photo-reduction of
... phenomenon does not
... formation and the
... occurs with
... made photo-
... of pheophytin a con-
... The immediate
... 640-m μ absorption band
... at 670 m μ remains
... photo-reduction of
... After 2.5 min. the is
... only by pheophytin
... of its 670 m μ max. to
... 4.48, 42931, 688.0.
... at -40° in the dark. A
... with pheophytin b. Besides ad-
... riboflavin and methyl red as
... a definite reaction was ob-
... Chlorophyll presents some dif-
... however, as the presence of en-
... tendency for oxidation max

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USSH/ Chemistry - Biochemistry

Card 1, 1 Rec. 1, 1, 1

Authors: Yezingeyer, Y. B., and Gornilova, V. A.

Title	1	Effect of the degree of reduction on the activity of chlorophyll solutions and on the rate of oxygen evolution during their photo-reduction
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Periodical : Dokl. Akad. Nauk SSSR, 1952, 47-48, No. 1, 1955

Abstract : Reports are given on a method for determining the photoconductivity of polyaniline, indigo and a solution of certain other pigments. The tests were carried out mostly in pyridine solutions with phenylhydrazine in the role of reagent. Aqueous ceric ammonio sulfate as an electrolyte increase the dark conductivity and reduces the relative change in conductivity during illumination. The rate constant during direct and sensitized photoresistance of ceric ammonio sulfate was determined. Three USSR references, 1964-1966, only.

Institution : Acad. of Sc., USSR, Inst. of Biochemistry im. A. N. Bakh

Submitted : February 12, 1955

Name: YEVSTIGNEYEV, Vyacheslav Borisovich

Dissertation: Oxidation-Reduction Properties of Chlorophyll
in Connection with its Role during Photosynthesis

Degree: Doc. Biol Sci

Affiliation: [not indicated]

Defense Date, Place: 10 May 56, Council of the Inst of Biochemistry
imeni Bakh, Acad Sci USSR

Certification Date: 15 Sep 56

Source: BMVO 6/57

YEVSTIGHNEV, V.B.; GAVRILOVA, V.A.

Reversibility of the Timiriazov-reaction, and the relation between dark- and photochemical reduction of chlorophyll and its analogues. Dokl.AN SSSR 108 no.3:507-510 Ky '56.(MLRA 9:8)

1. Institut biokhimii imeni A.N. Bakha Akademii nauk SSSR.
Predstavleno akademikom A.A. Tereninym.
(Chlorophyll)